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A New Upper Hypogean *Trechiama* (Coleoptera, Trechinae) from the Sanuki Hills in Northeastern Shikoku, Japan

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Abstract A new upper hypogean species of anophthalmic *Trechiama* is described from near the western end of the Sanuki Hills in northeastern Shikoku, Southwest Japan. It is closely allied to *T. bandoi* S. UÉNO, but is readily recognized on the presence of a second setiferous dorsal pore on the 3rd elytral stria, and looks like a member of the *ohshimai* group in external morphology. This unusual species is dedicated to the memory of Michio CHÛJÔ, and is named *Trechiama chujoi*.

This paper is designed for dedication to the memory of Michio CHÛJÔ (1908–2004), one of the leading coleopterologists in the 20th Century of Japan. He studied and taught at the Entomological Laboratory of Taihoku Imperial University before and during the Second World War, and taught mainly at Kagawa University after the war till 1972.

In dedicating a new trechine beetle to his memory, it seems to us most appropriate to select a species endemic to the Sanuki Hills (also called the Asan Hills) that delimit the southern border of Kagawa Prefecture, in which is located Kagawa University. Several anophthalmic species of the genus *Trechiama*, all belonging to the *satoui* complex of the *oni* group, have already been known from the hill range that stretch from west to east for about 90 km (cf. UÉNO, 1975, 1983 b, 1985, 1986). The new species to be described in this paper under the name of *Trechiama chujoi* also belongs to the same lineage, but is identical in elytral chaetotaxy with the members of the *ohshimai* group, whose representatives have been known, in Kagawa Prefecture, only from two isolated localities near the northern coast (cf. UÉNO, 1983 a, 1990).

The abbreviations employed in this paper are the same as those explained in previous papers of UÉNO's.

Trechiama (s. str.) ***chujoi*** S. UÉNO et Y. ITÔ, sp. nov.

(Figs. 1–3)

Length: 4.45–6.05 mm (from apical margin of clypeus to apices of elytra).

Belonging to the *satoui* complex of the *oni* group and closely allied to *T. bandoi* S. UÉNO (1986, p. 126, figs. 4–5) from an abandoned conduit at Umenokibara of Awachô, but distinguished at first sight from the latter by the presence of two setiferous dorsal pores of the internal series of elytra. Different from *T. bandoi* also in some details of the male genitalia, in particular in the thin straight apical lobe dorsally denticulate at the extremity and hardly flattened aedeagal tube with short basal part.

Closely similar to *T. bandoi* in facies and coloration, with the exception of striation and chaetotaxy of elytra; striae almost smooth, very ambiguously punctulate at the most; stria 3 almost always provided with two setiferous dorsal pores as in the members of the *ohshimai* group, at 1/8–1/6 and 1/3–4/9 from base, respectively; stria 5 also with two setiferous dorsal pores, at 1/6–2/9 and 4/7–2/3 from base, respectively. Standard ratios of body parts: PW/HW 1.39–1.50 (M 1.45), PW/PL 1.06–1.15 (M 1.09), PW/PA 1.43–1.54 (M 1.47), PW/PB 1.37–1.45 (M 1.41), PB/PA 1.01–1.12 (M 1.05), EW/PW 1.59–1.71 (M 1.67), EL/PL 2.72–3.01 (M 2.85), EL/EW 1.51–1.61 (M 1.57).

Male genital organ small though moderately sclerotized, basically similar to that of *T. bandoi*, but the aedeagus is hardly flattened, and the apical lobe is obviously narrower, slenderer, and hardly curved ventrad. Aedeagus three-tenths as long as elytra, about as high as broad at middle, hardly arcuate, and with shorter basal part rather strongly bent ventrad; viewed laterally, apical part gradually tapered into thin apical lobe, which is almost straightly produced and dorsally denticulate at the very extremity; viewed dorsally, apical lobe narrow, symmetrical, nearly parallel-sided in apical half, and narrowly rounded at the tip; basal part relatively short, deeply emarginate at the sides of basal orifice, and bearing a narrow sagittal aileron; ventral margin slightly bisinuate in profile. Inner armature as in *T. bandoi*, devoid of differentiated copulatory piece. Styles relatively short, each bearing four apical setae.

Variety of elytral chaetotaxy. Unlike *T. bandoi*, this new species shows a relatively stable chaetotaxy of the elytra, ten out of the eleven specimens examined invariably bearing two setiferous dorsal pores on both the third and fifth striae. In one male paratype, however, setiferous dorsal pores of the internal series are missing altogether on both the elytra, so that the specimen looks like *T. satoui* S. UÉNO (1975, p. 204, figs. 1–3) in this point.

Type series. Holotype: ♂, 220 m alt., 8–V–2004, Y. ITÔ leg. Allotype: ♀, 220 m alt., 3–IX–2004, Y. ITÔ leg. Paratypes: 2 ♂♂, 1 ♀, 220 m alt., 17– IV–2004, Y. ITÔ leg.; 1 ♂, 220 m alt., 22–V–2004, Y. ITÔ leg.; 1 ♀, 220 m alt., 3– IX–2004, Y. ITÔ leg.; 1 ♂, 1 ♀ (teneral), 280 m alt., 5–VI–2004, Y. ITÔ leg.; 1 ♂ (teneral), 1 ♀, 280 m alt., 14–VIII–2004, Y. ITÔ leg. (found in baited traps set by Y. ITÔ on 3–VIII–2004). All deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

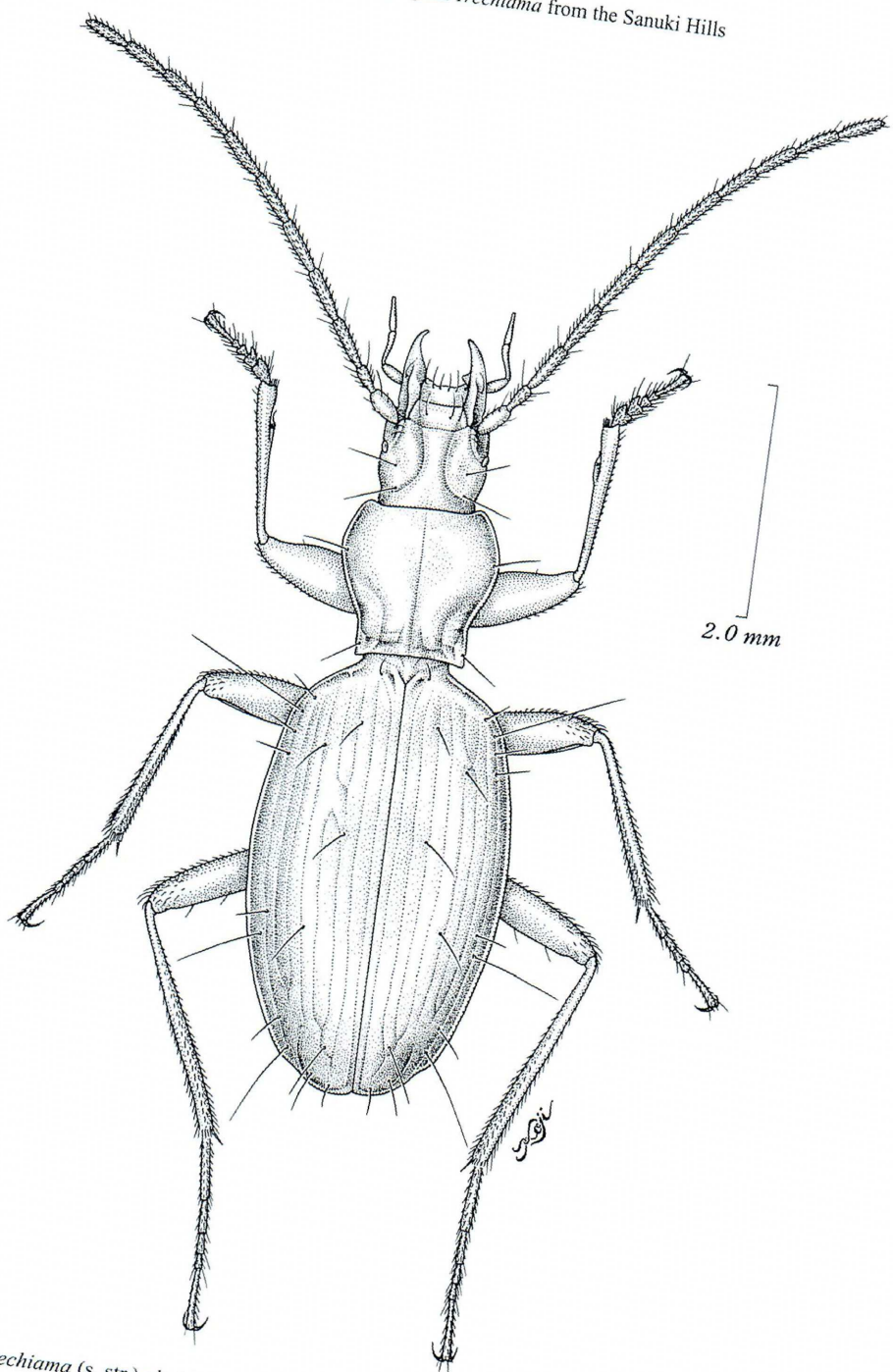
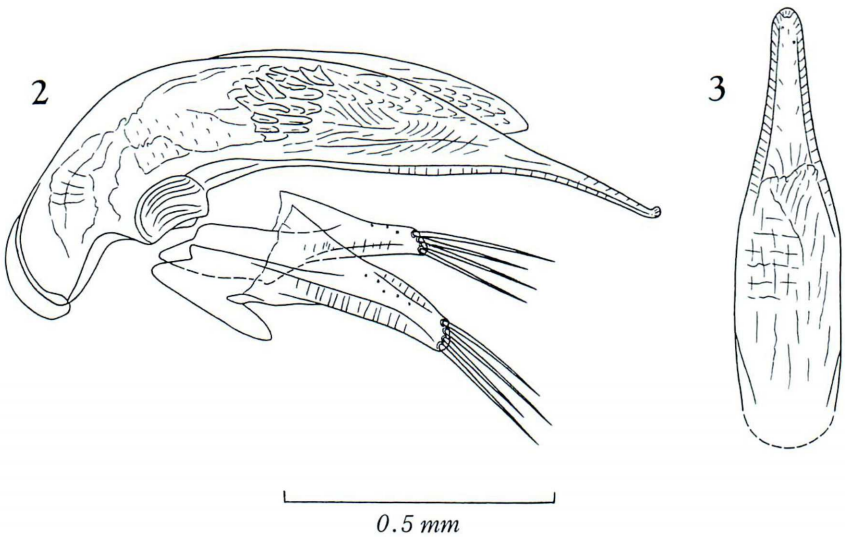


Fig. 1. *Trechiama* (s. str.) *chujoi* S. UÉNO et Y. ITÔ, sp. nov., ♂, from Shikinoué of Hakuchi.



Figs. 2–3. Male genitalia of *Trechiama* (s. str.) *chujoi* S. UÉNO et Y. ITÔ, sp. nov., from Shikinoué of Hakuchi; left lateral view (2), and apical part of aedeagus, dorsal view (3).

Type locality. Shikinoué of Hakuchi, 220 m in altitude (Sakai-gawa) and 280 m in altitude, in Ikeda-chô of Tokushima Prefecture, Southwest Japan.

Notes. It is doubtless that *Trechiama chujoi* belongs to the *satoui* complex in view of the characteristic conformation of its male genitalia and is particularly close to *T. bandoi*, with which it shares practically identical facies. The type locality of the latter species is about 41 km distant to the east by north in a beeline from that of the former, both lying on the same side of the Yoshino-gawa Valley. Representing the Median Tectonic Zone, the lower part of the valley down from the Ikeda bend seems to have served as a barrier against dispersal of ancestral trechines of the *Trechiama* series. This can be readily understood from the fact that another anophthalmic species, *T. duplicatus* S. UÉNO (1986, p. 123, figs. 1–3), which does not belong to the *satoui* lineage, occurs in an abandoned mine adit only 6.6 km apart to the south from the known habitats of *T. chujoi* but located on the other side of the Yoshino-gawa.

Possession of two setiferous pores of the elytral internal series is quite exceptional for a trechine beetle belonging to the group of *Trechiama oni*. This character state is currently considered to be an archaic condition, so that *T. chujoi* could be regarded either as a relict species or as a species showing chaetotaxial reversion. The latter inference appears more plausible to us, since a specimen with the typical *satoui* pattern of elytral chaetotaxy was found mingled with typical specimens of *T. chujoi*.

This interesting new species has been taken in two gullies slanting down side by side on the southern slope of the Sanuki Hills into the left side of the Yoshino-gawa River, at 220 m in altitude in the eastern gully (called Sakai-dani) and at 280 m in alti-

tude in the western one. The distance between the two is about 370 m in a beeline. Both the gullies are shaded by deciduous broadleaved trees, and the eastern one in particular is rather clayey and wet. Trechine beetles were dug out from a colluvium deposited at the base of an outcrop, from a depth of 30–50 cm. The western gully passes through rock walls and is rather dim even at the daytime, but a fairly large scree is formed at its source. *Trechiama chujoi* was found at a depth of about 50 cm near the skirts of the scree.

要　　約

上野俊一・伊東善之：讃岐山脈の地下浅層にすむメクラチビゴミムシの1新種．——讃岐山脈の西端部に近い吉野川大屈曲部の左岸から，地下浅層性のメクラチビゴミムシの1種を記載し，これを2004年6月9日に95歳で亡くなった故中條道夫博士に捧げて，チュウジョウメクラチビゴミムシ *Trechiama chujoi* S. UÉNO et Y. ITÔ と命名した．

この新種は，雄交尾器の構造からみて，明らかにオニメクラチビゴミムシ群のものでありながら，上翅の剛毛式はより祖先的なヨシイメクラチビゴミムシ群の特徴を示し，剛毛式が先祖返りをした種である可能性を窺わせる．

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